DAM FAILURE

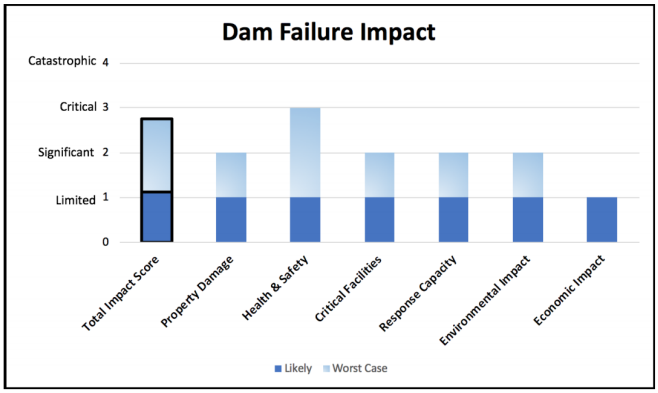
A Dam Failure occurs when some or all of a dam's water-retaining barrier becomes damaged causing the uncontrolled release of water downstream and can lead to rapid flooding of downstream land. A Dam Failure can be the result of a design or construction error, insufficient maintenance, human error, or internal erosion. Dam Failures can also occur as the result of an intentional attack or as a cascading effect of natural hazards such as flooding, earthquakes, or geological instability.

HAS IT HAPPENED LOCALLY?

There have been three confirmed Dam Failure events in Howard County during the reviewed time period (1999-2019). All have been relatively minor incidents. In 2006, a low-hazard earthen dam retaining a stormwater management pond in Columbia experienced a barrel pipe collapse. The total cost to replace the pipe outlet and repair the damage was $208,000.

WHAT IS THE ONGOING RISK?

There is an expected **0-10% Chance of Annual Occurrence** of a Dam Failure in Howard County. In the most likely Dam Failure scenario, the **Total Impact is considered Limited**. In the worst-case scenario, the **Total Impact is considered Significant-Critical**.

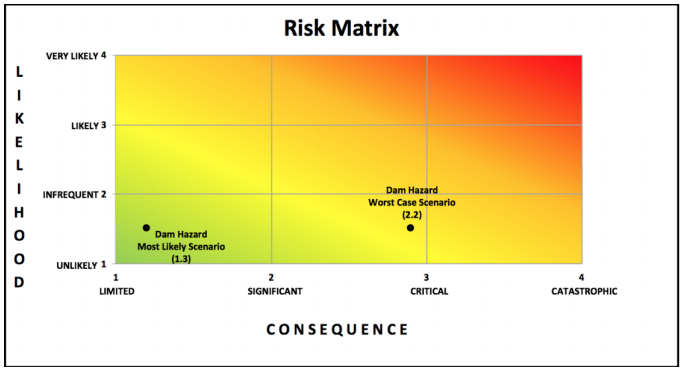


DID YOU KNOW?

- Howard County has over 2,000 small earthen dams on ponds, streams, and minor bodies of water.
- Most of the recognized dams in Howard County are relatively small earthen impoundments created for either flood control or recreation. However, the Columbia Gateway, Centennial Park, Holly House Meadows, Lake Elkhorn, and Oakhurst Section 1 Dams are classified as high hazard dams. An additional 21 dams are classified as Significant Hazard dams.

Dam Failure Risk Profile

	Risk Assessment Category	Likely Hazard Scenario	Worst-Case Hazard Scenario	Weight
LIKELIHOOD	Likelihood	1.5 Unlikely-Infrequent		50%
CONSEQUENCE	Impact	1.1 Limited	2.7 Significant-Critical	40%
	Warning Time	3 Moderate	4 Short	5%
	Duration	1 Short	4 Very Long	5%
	TOTAL RISK SCORE	**1.3**	**2.2**	



FOR MORE INFORMATION:

- Howard County Hazard Identification and Risk Assessment
- Maryland Dept. of the Environment
- Federal Emergency Management Agency